

**Contract Amendment No. 3**  
**Hatt Slough Springs Rehabilitation – Phase 1**

*RH2 Project No. STA 413.016*

In accordance with our Professional Services Agreement for the Hatt Slough Springs Geologic and Geotechnical Evaluation dated January 25, 2013, this is an authorization to revise the project Scope of Work as described below. The work will be performed and invoiced using the terms and conditions listed in the Original Agreement, plus previous amendments and/or agreements.

Please see the attached **Exhibit A** and **Exhibit B**.

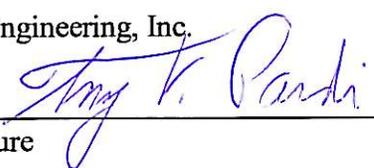
The engineering fee authorization will increase by \$19,998 for a total authorization amount of **\$67,202**.

Please sign this authorization in the space provided below and mail or fax to RH2 Engineering, Inc., 22722 29<sup>th</sup> Drive SE, Suite 210, Bothell, WA 98021. FAX 425-951-5401.

RH2 Engineering, Inc.

City of Stanwood

Signature



Signature

Tony V. Pardi

Print Name

Print Name

President

Title

Title

Date

8/7/13

Date

**EXHIBIT A**  
**Amendment No. 3**  
**Scope of Work**  
**City of Stanwood**  
**Hatt Slough Springs Rehabilitation – Phase 1**  
August 2013

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## **Background**

The City of Stanwood's (City) Hatt Slough Springs source of supply facility is located south of the City limits and Hatt Slough, near the base of a steep slope. The springs are situated on City-owned property in an undeveloped area that is accessed by a dirt road from Marine Drive. Four spring collection areas are located within the fenced and secured property. The Washington State Department of Health (DOH) directed the City to seal the collector boxes at the springs and the sealing was completed in 2010. Each collection area has an infiltration piping gallery that delivers water to a 300-gallon settling tank. Water is conveyed by gravity through pipes from each of the settling tanks to the pump building, which houses the mechanical, chlorination, and electrical equipment. The Hatt Slough Springs source was constructed in 1934 and was granted a maximum instantaneous water right of 1,125 gallons per minute (gpm) in 1939 under water right S1-02432CWRIS. However, the current maximum supply rate of the springs is approximately 250 gpm, when the source of supply is in use. The access road to Hatt Slough Springs became impassable in late 2011 and at that time the use of Hatt Slough Springs as a source of supply was temporarily halted.

Beginning in January 2013, RH2 Engineering, Inc., (RH2) performed an initial geologic and geotechnical analyses for evaluating the feasibility of the City's continued operation of the Hatt Slough Springs source and potential enhancement of the water supply rate from the source. The project included an evaluation of repairing the existing access road, an evaluation of the options for improving the spring collection system, and the options for developing a well or well field source to fully utilize the existing water right and increase water production. The analyses results concluded that an interim solution to repair the road and improve drainage was warranted to improve access to the springs. The City intends to contract for road repair, which will include removal of soil on the access road, re-grading the road, and installing a drainage system to collect and convey seepage away from the road. The spring rehabilitation analyses determined that there was limited potential for improving spring production beyond 350 gpm. With the current spring collection boxes, the City should be able to continue to withdraw the previous flow rate of approximately 250 gpm. RH2 is proceeding with an additional phase of the project to evaluate the potential existence of groundwater sources capable of producing a sustainable supply of potable groundwater at rates between 350 and 500 gpm from single or multiple wells with the intent to transfer water rights from Hatt Slough Springs to a new point or points of withdrawal.

Since the road improvement is planned and the City has approximately 250 gpm available from the existing Hatt Slough Springs collection system, the City desires to improve the reliability of the existing Hatt Slough Springs facility. The City's 2010 *Comprehensive Water System Plan* (WSP) recommends Capital Improvement Project (CIP) F11: Hatt Slough Springs Rehabilitation based on the following deficiencies:

Hatt Slough Spring is an aging facility. The building is a wood-frame structure with a steel roof and chicken wire covered windows. The facility is dimly lit and generally in poor condition. The pumps and interior piping are also aging and in need of replacement. The facility is not equipped with an engine generator set to allow backup power supply in the event of a power outage. The

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**Exhibit A – Scope of Work**  
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existing collection system does not have the capacity to fully utilize the water right for the spring source.

At this time, the City desires to replace the wood structure with a concrete block structure, install new pumps, replace the float system in the holding chamber of the reservoir, install a chemical feed and analyzer for the chlorine system, and install telemetry to improve the condition, functionality and overall reliability of the Hatt Slough Springs facility.

RH2 will work with the City to complete the following tasks for this project:

Phase 1 – Hatt Slough Spring Rehabilitation Design Part 1 (2013)

Task 1 – Hatt Slough Springs Rehabilitation Design Part 1

Phase 2 – Hatt Slough Springs Rehabilitation Design Part 2, Permitting, Services During Bidding, and Services During Construction (2014)

Task 1 – Hatt Slough Springs Rehabilitation Design

Task 2 – Permitting Assistance

Task 3 – Services During Bidding

Task 4 – Services During Construction

This project will be divided into Phase 1, to be completed in 2013, and Phase 2, to be completed in 2014. The Phase 1 Scope of Work follows. The Phase 2 scope will be finalized when Phase 1 is concluded.

## **PHASE 1 – Hatt Slough Springs Rehabilitation Design Part 1 (2013)**

### **Task 1 – Hatt Slough Springs Rehabilitation Design Part 1**

**Objective:** Prepare the initial design for the proposed improvements.

**Approach:**

- 1.1 Survey Coordination – Coordinate with the City’s surveyor on survey limits and requirements. It is assumed that the City will contract separately with a surveyor.
- 1.2 Prepare Existing Site Plan – Perform one (1) site visit to compare survey information with field conditions. Prepare and update site plan as necessary based on site visit.
- 1.3 Pump Selection and Sizing – Review the sizing and head curve of the three (3) existing pumps. Review the estimated maximum existing collection capacity of the springs (i.e., 250 gpm). Select pumps with characteristics that match the existing pumps. Review the head curve of the proposed pumps in the City’s hydraulic model.
- 1.4 Preliminary Design Criteria – Collaboration between the mechanical engineer, structural engineer, electrical and controls engineer, and treatment engineer to determine the sizing of various components for preliminary site plan layout.
- 1.5 Preliminary Floor Plan – Develop a preliminary floor plan that incorporates the initial sizing of structural, major mechanical, minor mechanical, electrical, and Supervisory Control and Data Acquisition (SCADA) system components. This task includes preliminary design for these components. Final design will be completed in Phase 2.

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- 1.6 Prepare Preliminary Site Plans – Prepare preliminary proposed site plans identifying the size of the proposed building, the proposed pump locations, proposed utilities, and other site improvements. Email the preliminary site plan and design criteria to City staff for general approval and discussion.

**Assumptions:**

- *The proposed pump building footprint will be approximately the same as the existing structure.*
- *The proposed building will be located in approximately the same location as the existing structure.*
- *Hatt Slough Springs will be offline during construction.*
- *Pumps will be selected to match the capacity of the existing facility.*
- *Phase 1 of this project will allow for approximately 20 percent design completion. Phase 2 will be necessary to continue and finalize the design, prepare the project report, project permitting assistance, and services during bidding.*

**Provided by City of Stanwood:**

- Construction plans or documents associated with the existing Hatt Slough facility.
- Existing pump manufacturer, model number, and horsepower information.
- Contract with a surveyor.

**RH2 Deliverables:**

- Email to the City regarding the status of the project at the end of 2013 and a PDF electronic copy of available preliminary plans.
- Summary of design criteria, existing site plan, preliminary proposed site plan, and preliminary proposed floor plan.

**EXHIBIT B**  
**City of Stanwood**  
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**Estimate of Time and Expense**

	Description	Total Hours	Total Labor	Subconsultant	Total Expense	Total Cost
	Classification					

<b>Task 1</b>	<b>Hatt Slough Springs Rehabilitation Design Part 1</b>					
1.1	Survey Coordination	9	\$ 1,308	\$ -	\$ 129	\$ 1,437
1.2	Prepare Existing Site Plan	16	\$ 2,404	\$ -	\$ 373	\$ 2,777
1.3	Pump Selection and Sizing	6	\$ 928	\$ -	\$ 87	\$ 1,015
1.4	Preliminary Design Criteria	20	\$ 3,266	\$ -	\$ 337	\$ 3,603
1.5	Preliminary Floor Plan	42	\$ 6,434	\$ -	\$ 691	\$ 7,125
1.6	Preliminary Site Plans	24	\$ 3,646	\$ -	\$ 396	\$ 4,042
	<b>Subtotal</b>	<b>117</b>	<b>\$ 17,986</b>	<b>\$ -</b>	<b>\$ 2,012</b>	<b>\$ 19,998</b>

<b>#REF!</b>	117	\$ 17,986	\$ -	\$ 2,012	\$ 19,998
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<b>PHASE 1 (2013) PROJECT TOTAL</b>	<b>117</b>	<b>\$ 17,986</b>	<b>\$ -</b>	<b>\$ 2,012</b>	<b>\$ 19,998</b>
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